Genesys Cloud CX™ India

Regulatory Landscape and Architecture

Genesys Cloud Product Management
January 2025 v1.6.5

Contents

Terms & conditions

Table of Contents

Genesys Cloud CX currently offers service in 14 core regions globally including India with 5 satellite regions and a region specifically for US FedRamp requirements. India has some unique telecommunications laws that need to be reviewed by Customers locating Contact Centers within India. This document provides an overview of the India regulatory landscape and Genesys Cloud CX architectures for Domestic and International implementations in India.

This presentation is for informational purposes only relating to Genesys Cloud CX use in India. It represents Genesys' knowledge and experience with India telecommunications regulations. The information is not legal advice and prior to implementing any solution, customers should consult with their legal counsel, their telephony service provider (TSP), and the India DoT in order to ensure that they are in compliance with all India laws as well as telecommunications and contact center regulations.

The regulatory environment may change, or customers specific use of services, so the document is presented as informational. There are no penalties, damages or other remedies associated with incorrect information or errors of omission that may occur in this overview.

NOTE: In August of 2024, Genesys Cloud Services India Pvt. Ltd obtained a Universal License for Virtual Network Operators (ULVNO) license in India from the India Department of Telecommunications (DOT) and is now allowed to sell contact center solutions directly. Separately, Genesys has obtained National Long Distance (NLD) and International Long Distance (ILD) licenses in India and plans to begin offering Genesys Cloud Voice service in India in the future.

Important Definitions

Table of Contents

- **TSP – Telephony Service Provider –** This is the customer's telephone company – Tata, Airtel, etc.. or others
- **OSP – Other Service Provider –** This is the customer's contact center or BPO.
- **DoT – Department of Telecommunications –** A division of the India government that oversees creating and enforcing telecommunications laws and regulations.

NOTE: There are specific India regulations pertaining to Domestic (intra India) telecommunications and International (foreign) services. Each must be reviewed based on the specific customer deployment model.

The India Regulatory Landscape is Evolving

Table of Contents

- **In August of 2024, Genesys obtained it's ULVNO license in India and is now able to sell India solutions directly to customers.**

- Beginning in March of 2020 the India DOT began relaxing the terms and conditions for OSP Centres in India in the wake of Covid-19 concerns
- 1H 2020 Regulatory Changes
  - Removed the requirement for security deposits for Work From Home (WFH) agents
  - Removed the requirement for obtaining VPN from TSP's for WFH Agents
  - Removed the requirement for obtaining "permission" for WFH agents
    - Notification, tracking, static-IP, CDRs and other requirements remain

- November 2020 – Permanently Revised OSP Guidelines
  - Removed OSP Registration Requirements
  - Allowed VPN to interconnect OSP's
  - Allowed aggregated traffic from international POP's over MPLS
  - Allowed interconnection of agents to OSP Centre's via VPN in support of WFH/WFA (Work from Anywhere)
  - Allowed Centralised and shared internet for multiple OSP Centres
  - Removed bank guarantee requirements
  - Interconnectivity between OSP companies allowed
  - Reconfirmed the requirement for not mixing International and National LD (re-affirms separation of domestic and international calls)
  - Allows Foreign EPABX for International, but re-affirms requirements of toll bypass prevention, privacy regulations, and locally stored CDRs with IST timestamps

The India Regulatory Landscape is Evolving

Table of Contents

- June 2021 – Further simplification and clarification of DOT Regulations
  - No registration is required
  - No bank guarantees are required
  - For India-based agents utilizing a PBX within India, any technology, including the internet can be utilized for work-from-home/work-from-anywhere agents.
  - For foreign PBX solutions (outside of India), agents must still be connected via private connectivity, such as vpn, to the OSP Center/office with traffic from the OSP Center/Office routed via private connectivity such as MPLS/IPLC, AWS Direct Connect, etc..
  - Internet can be obtained from any TSP and shared between OSP's (centralized)
  - Non-voice entities are no longer regulated by the DOT (non-voice BPO's)
  - OSP's need to self-regulate and no longer report to the DOT regularly. Routine inspections will no longer occur.
  - Shared infrastructure is allowed.
  - Foreign EPABX is allowed – CDRs and toll-bypass requirements are still enforced
  - Third-party hosting and TSP hosting is allowed
  - No restrictions on interconnectivity
  - No restrictions on voice interconnectivity for internal communication
  - Added the requirement of MAC-ID to UDR's – maintained the requirement for tamper proof CDRs copy at an OSP Centre with IST timestamps and must be maintained for 1 year
- September 2021 – TSP changes
  - Significant relaxation of financial requirements TSP requirements including allowing 100% FDI (Foreign Direct Investment), bank guarantees reduced by 80%, and more
  - These changes are currently being reviewed but create an environment for increased competition and reduced costs for India Telecom Operators

Important India Specific Considerations

Table of Contents

- **Genesys does not currently recommend utilizing the same agents for handling both international and domestic calls due to the potential risk of toll-bypass.**
- **Domestic India contact center agents may utilize the Genesys Cloud CX™ Mumbai instance.**
- **Domestic India contact center agents may also use a global Genesys Cloud CX™ instance located outside of India. For this use case, call audio (RTP) must be kept within India by utilizing the Genesys Cloud CX™ Mumbai instance with Global Media Fabric. We recommend exploring this option with your Genesys Cloud architect or solution consultant prior to implementation, should you choose this option.**
- **Domestic India contact center solutions are required to be sold by a licensed TSP in India. Note: Genesys obtained a ULVNO license in August of 2024 and now sells Genesys Cloud CX™ directly.**
- **Storing a copy of Call Detail Records (CDRs) In India with an India (IST) Timestamp is required in case of an audit**
- **Remote agents utilizing the Mumbai instance may utilize the internet for connecting, including calls. If a foreign PBX is being utilized (a Genesys instance outside of India), agents must still connect to the OSP Centre via vpn and their traffic must be routed outside of India via MPLS**
- Telecommunications in India are regulated by the Indian government, specifically by the Department of Telecommunications (DoT). These regulations have been changing based on factors such as work from home agents but continue to evolve.
- The India telecommunications environment is highly regulated and does not allow calls to traverse the open internet or to bypass toll charges in any way. There are also established regulations for calling between the 22 specific regulatory circles within India.
- Customers should consult with their legal counsel, their TSP, and the India DoT prior to implementing any solution to ensure that they comply with all India DoT laws and regulations.
- Toll Bypass (calls avoiding paying toll charges) has been a major concern of the regulations.

Additional India Specific Considerations

Table of Contents

- Registration/Application for an “Other Service Provider” (OSP) licenses with the India Government to operate a contact centre or upon making changes to their configuration or architecture
- Interpretation can vary based upon province or Licensing Service Area (LSA). Because OSP filing and review are decentralized, and interpretation will vary.
- Under India OSP regulations, an OSP is required to purchase telecom services from an authorised Telecom Service Provider (“TSP”) in India and such TSP is required to examine the network and architectural diagrams to ensure their acceptable use in conformance with India laws and regulations.
  - As part of the submission of the network to the regulators, the TSP must confirm that the connectivity from the proposed OSP centre to the location outside India, is through its network.
- There exists a distinction between international, national (circles) and special economic zones/free trade zones (SEZ/FTZ) which may require special configurations and architecture to route calls in different ways between these zones.
- Infrastructure cannot connect to National and International networks. Note: With new regulatory changes a single system may be possible provided that it provides logical separation and isolation.
- India’s DoT requires Call Detail Records (CDRs) that include details on the agent who handled the call for auditing and compliance. A copy of the CDRs must be maintained in India with an IST timestamp and accessible upon request of the India DoT.
  - CDRs must be maintained for at least 1 year and must include the following data elements:
    - Date (IST),Time (IST),Calling Number/User(Email)ID/Extension Number/DID(Complete CLI),Called Number/User(Email)ID /Extension Number/DID(Complete CLI),Call Duration(hh:mm:ss),Call Trunk Type(PSTN/VoIP),Direction of Call - Incoming/Outgoing
  - UDR’s are also a requirement and include additional data fields such as MAC-ID and must be maintained by the customer on-site.
- Calls cannot cross the India border 2 times – meaning that a call originating in India cannot leave the country and be routed back to an agent in India as this should be treated as a domestic call.

Genesys Cloud CX India Domestic Architecture - Inbound

Table of Contents

1. India Agent logs into Genesys Cloud AWS instance in Mumbai.

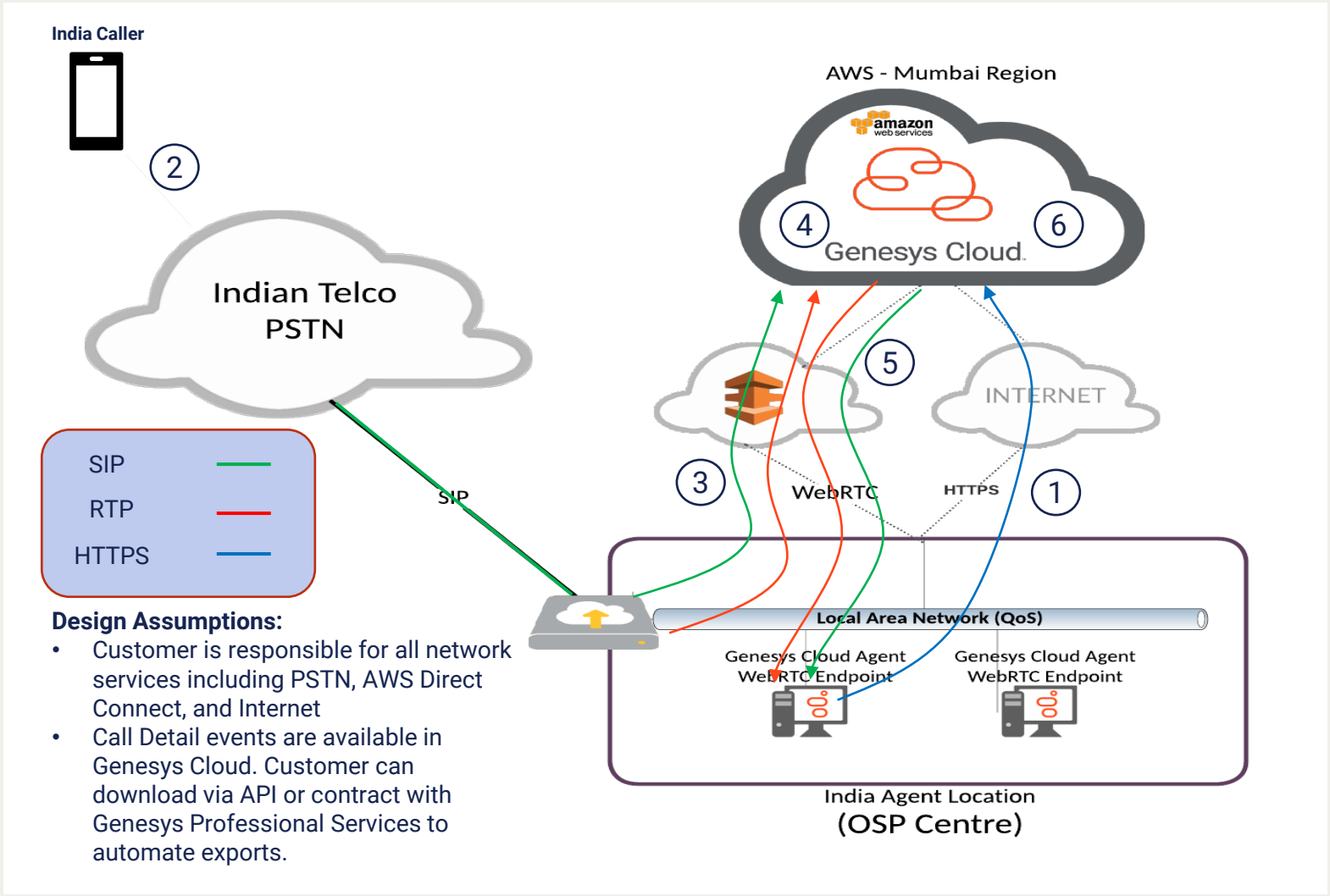
2. Caller Dials local India number provided by Indian carrier which terminates on SBC at customer premise.

3. Call is sent by SBC via SIP across AWS Direct Connect to Genesys Cloud in Mumbai.

4. Genesys Cloud receives call, performs IVR treatment and then selects agent to receive the call.

5. Genesys Cloud makes call to agent. Call is delivered via WebRTC. All RTP is delivered across AWS Direct Connect.

6. Once the agent answers, Genesys Cloud bridges the two parties together.



Design Assumptions:

- Customer is responsible for all network services including PSTN, AWS Direct Connect, and Internet
- Call Detail events are available in Genesys Cloud. Customer can download via API or contract with Genesys Professional Services to automate exports.

Genesys Cloud CX India Domestic Architecture - Outbound

Table of Contents

1. India Agent logs into Genesys Cloud AWS instance in Mumbai.

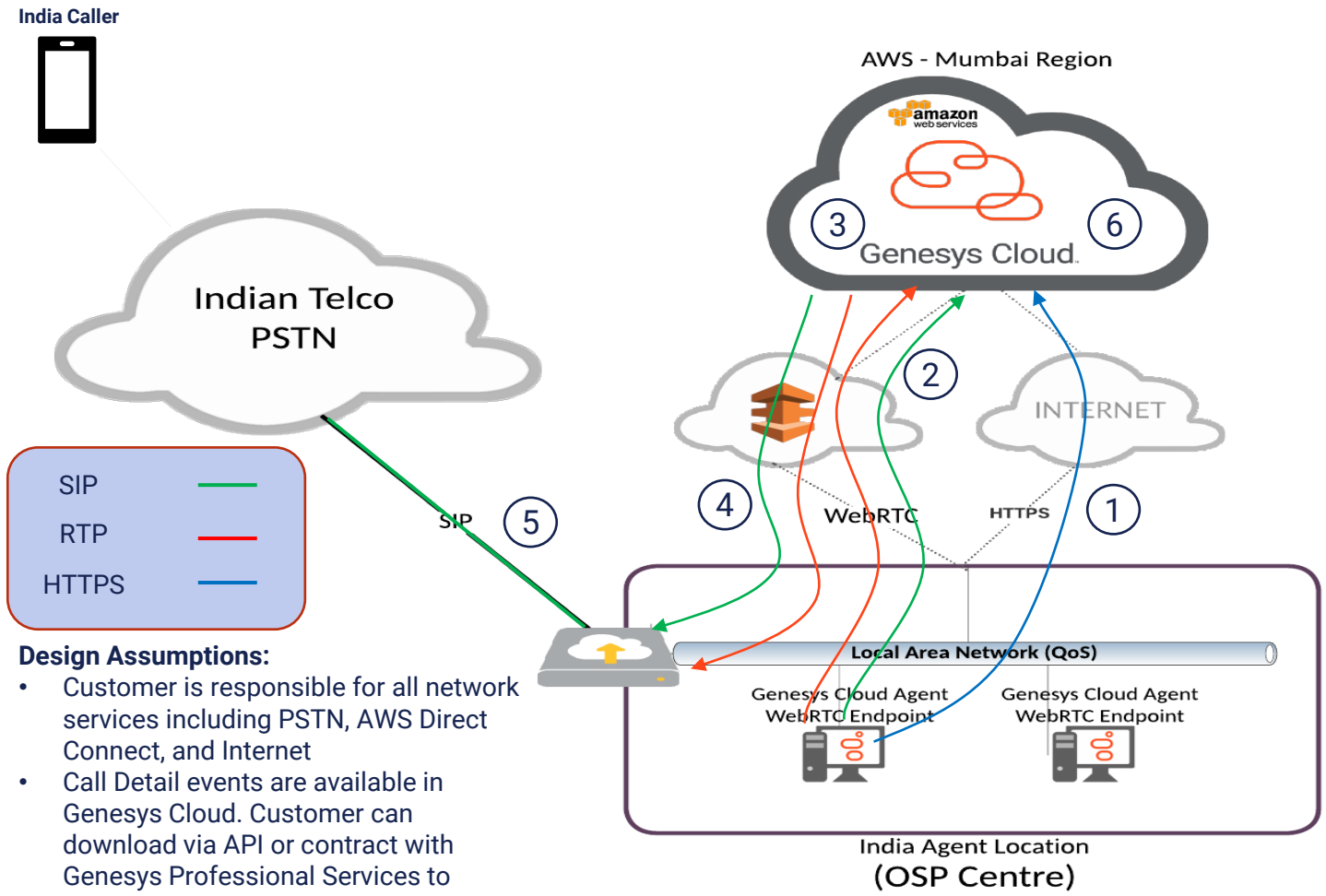
2. Agent dials customer number. Request is sent to Genesys Cloud via AWS Direct Connect.

3. Genesys Cloud chooses the trunk/route for the call.

4. Call request is sent via SIP over AWS Direct Connect from Genesys Cloud to SBC.

5. India Telco/PSTN routes call from SBC to customers phone.

6. Genesys Cloud bridges the two parties together.



Design Assumptions:

- Customer is responsible for all network services including PSTN, AWS Direct Connect, and Internet
- Call Detail events are available in Genesys Cloud. Customer can download via API or contract with Genesys Professional Services to automate exports.

Genesys Cloud CX India International Architecture - Inbound

Table of Contents

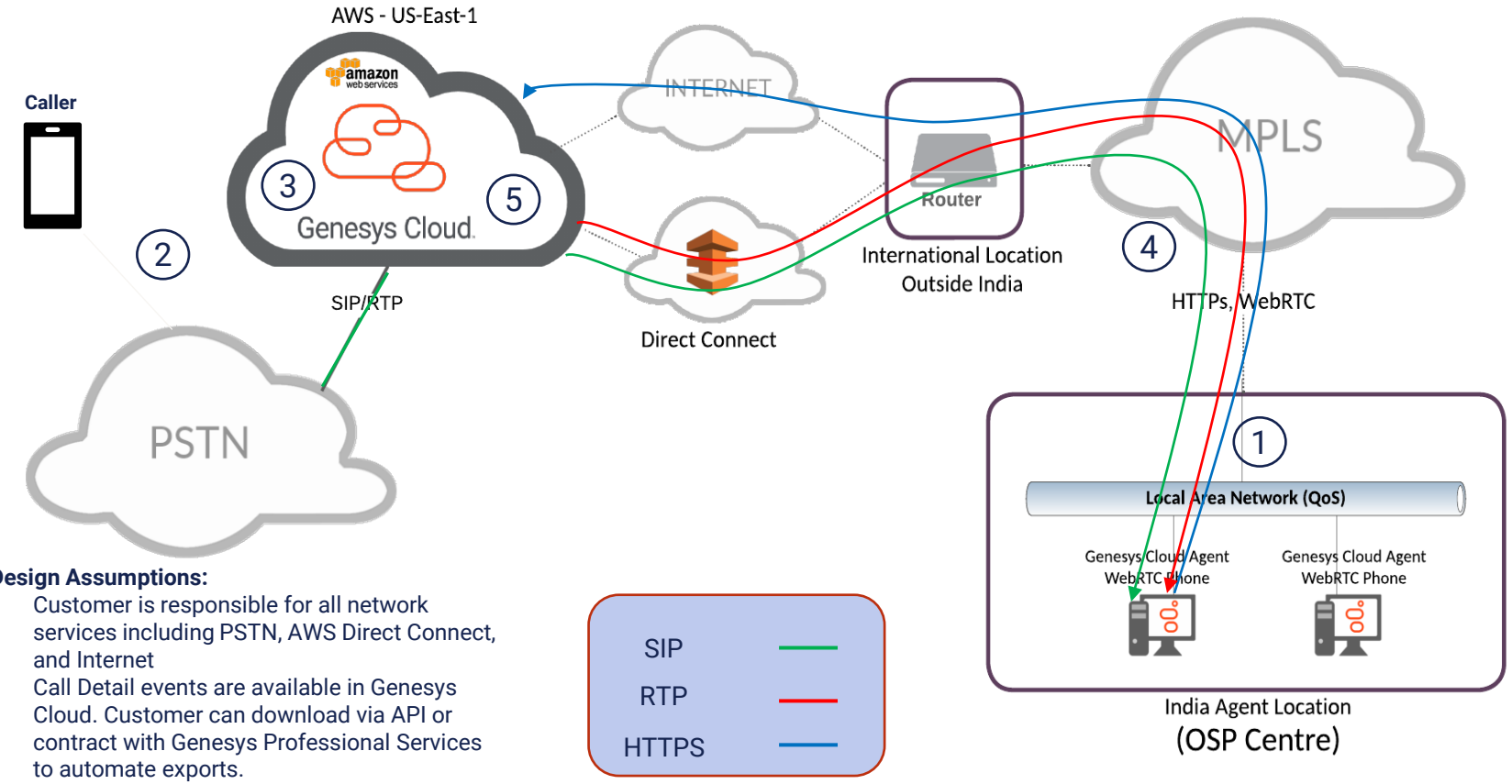
1. India Agent logs into Genesys Cloud AWS instance outside of India (ex: US-East1) from Agent desktop.

2. Caller Dials International (non-India) number which terminates at Genesys Cloud AWS location in US-East (for example)

3. Genesys Cloud receives call and performs IVR treatment (if required). Genesys Cloud selects agent for the call, which in this case happens to be in India.

4. Genesys Cloud delivers call to agent in India. Call travels across MPLS and is delivered to agent.

5. Once India Agent answers the Genesys Cloud bridges the two parties together.



Design Assumptions:

- Customer is responsible for all network services including PSTN, AWS Direct Connect, and Internet
- Call Detail events are available in Genesys Cloud. Customer can download via API or contract with Genesys Professional Services to automate exports.

Genesys Cloud CX India International Architecture - Outbound

Table of Contents

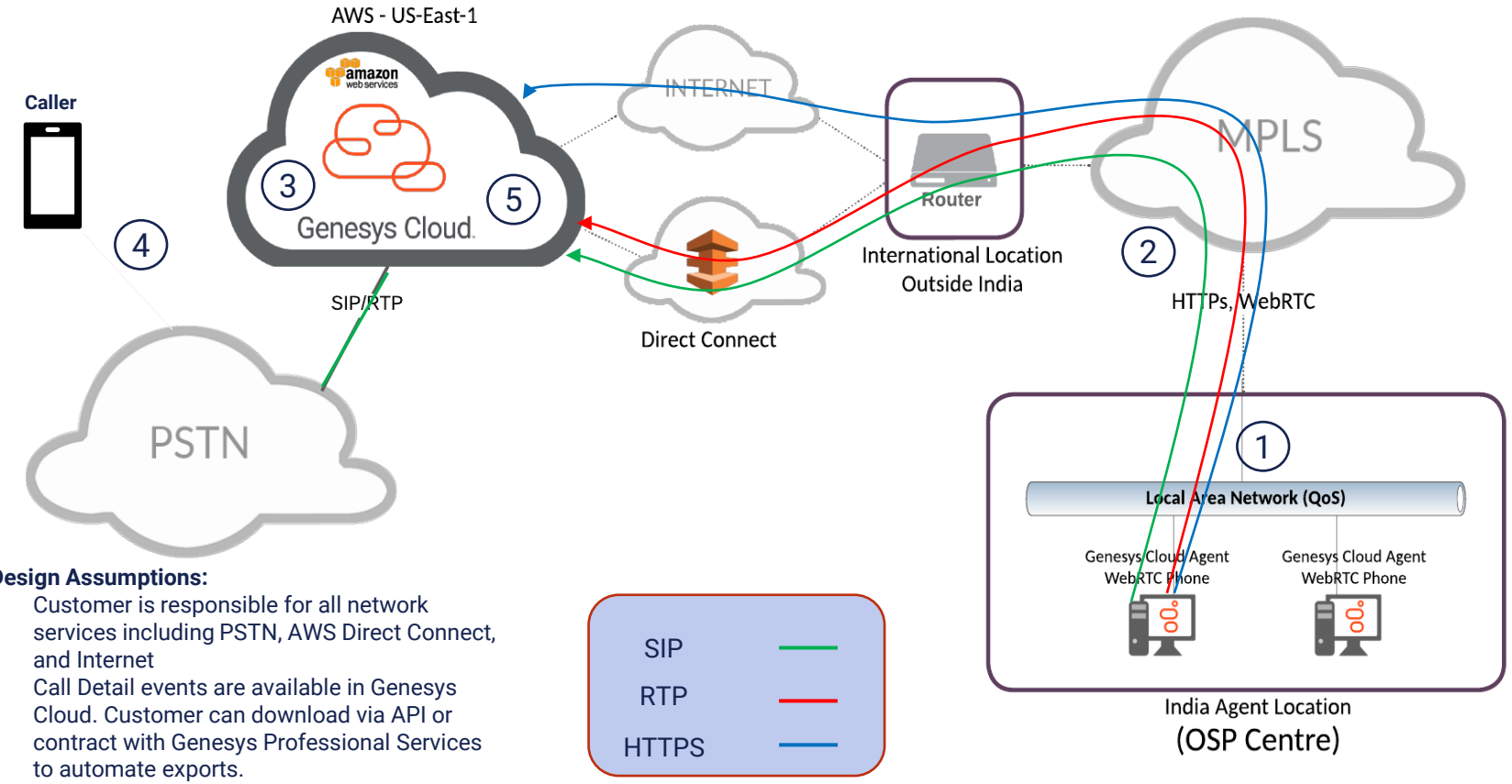
1. India Agent logs into Genesys Cloud AWS instance outside of India (ex: US-East1) from Agent desktop.

2. Agent Dials (non-India) number which originates at Genesys Cloud AWS location in US-East (for example)

3. Genesys Cloud sends call request to US-based Telco/PSTN Carrier via SIP.

4. US PSTN Carrier originates call to customer.

5. Genesys Cloud bridges the two parties together.



Design Assumptions:

- Customer is responsible for all network services including PSTN, AWS Direct Connect, and Internet
- Call Detail events are available in Genesys Cloud. Customer can download via API or contract with Genesys Professional Services to automate exports.

Genesys Cloud CX India Foreign Org Architecture

Table of Contents

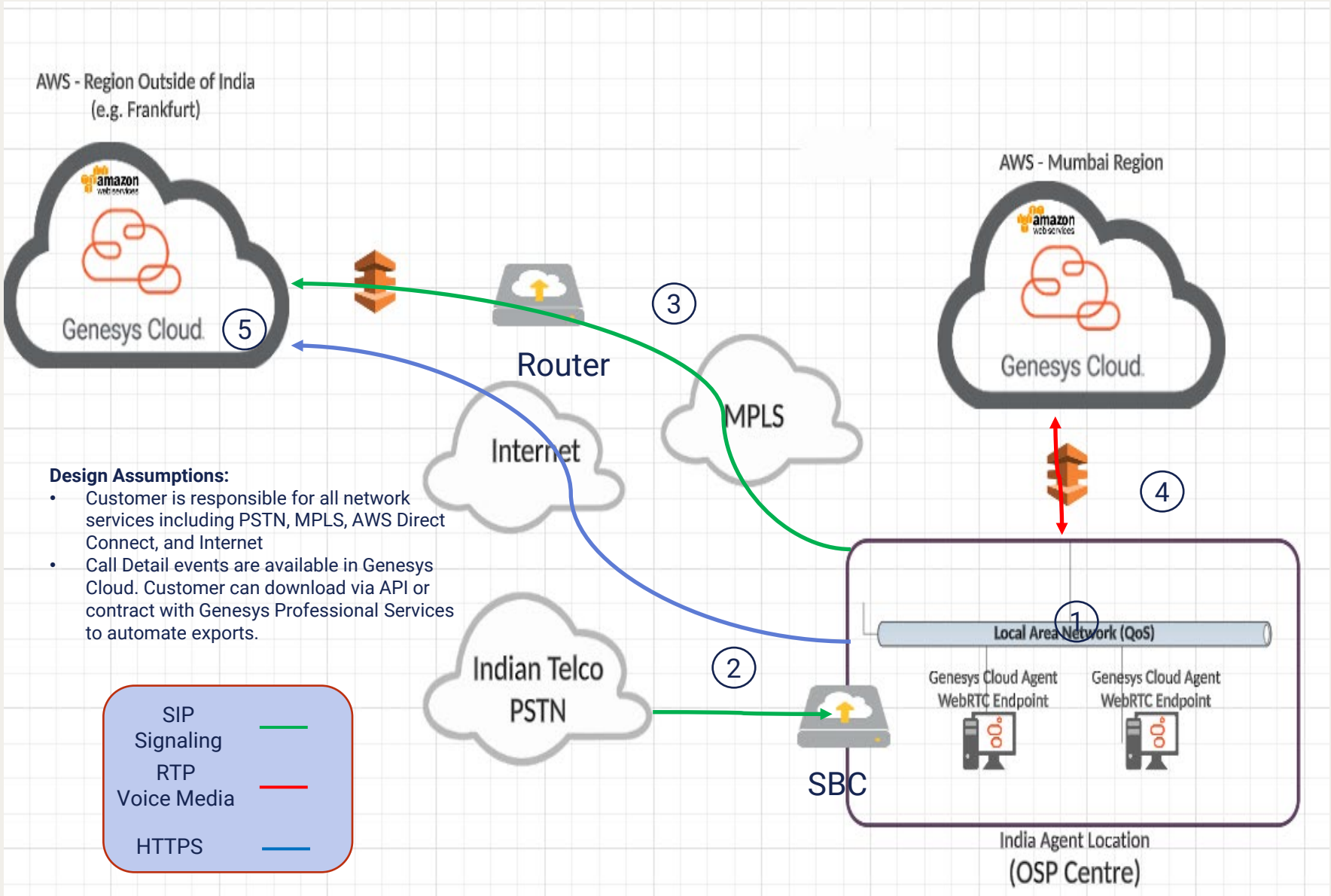
1. India Agent logs into Genesys Cloud AWS instance outside of India (ex: US-East1) from Agent desktop.

2. India domestic customer calls India number which routes to local SBC

3. SIP Signalling is sent to Genesys Cloud home region outside of India.

4. RTP/Voice media is routed to Genesys Mumbai region based on Global Media Fabric configuration.

5. Agent answers the call via WebRTC with media flowing through Mumbai region.



Thank you!